Engine idle control.

Operation:

The minimum idle solenoid, on the <u>Main Engine Control</u>, determines the position of the idle stop in the M.E.C. for low idle and high idle speeds. The solenoid is usually energized for low idle operation.

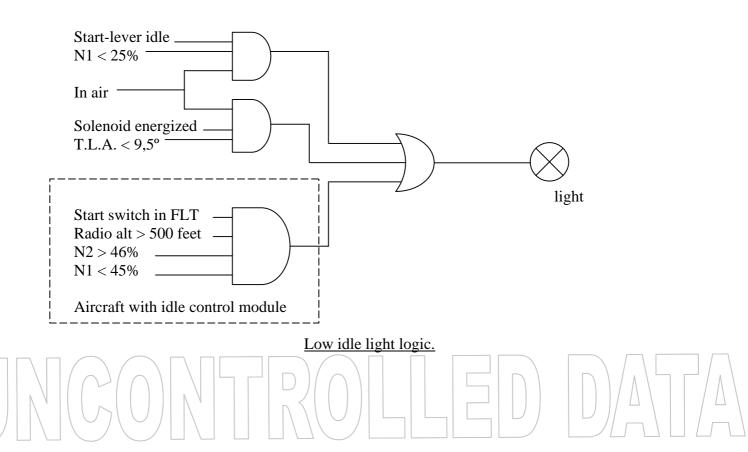
Low idle light is switched through various circuits, depending on aircraft effectivity.

- In flight the solenoids are de-energized providing high idle.
 - If, with start-lever in idle, the engine speed decreases to below 25% N1 rpm, the low idle light on P5 will illuminate.
- A failing flight-ground switch can energize the solenoids, providing low idle in flight.
 - In this and either thrust lever below 9.5° T.L.A., the low idle light on P5 will illuminate.

An additional engine low idle indication circuit reminds the flight crew of an operational requirement to maintain a minimum engine speed of 45% N1 during operations in precipitation.

This circuit also signals the A.T. computer to the higher minimum N1 limit.

• If the engine start switches are in flight, above 500 feet radio altitude, N2 is above 46% (engine not out) and the N1 is lower then 45%, the low idle light on P5 will illuminate.



Engine idle control.

Original (not valid in our fleet)

- An altitude switch will open above 16.000 feet maintaining a high idle condition on the engine. This will provide adequate airflow to the air conditioning system during ilde descent. If the altitude switch fails it will **not** be **indicated** by the low idle light.
- An aditional engine low idle indication circuit reminds the flight crew of an operational requirement to maintain a minimum engine speed of 45% N1 during operations in precipitation.

That is, when the engine anti-icing switches are on or the engine start switches are in flight. This circuit also signals the A.T. computer to the higher minimum N1 limit.

Start-lever idle N1 < 25% In air Solenoid energized T.L.A. $< 9,5^{\circ}$ Start switch in FLT Radio alt > 500 feet N2 > 46% N1 < 45% Aircraft with idle con	D C C C C C C C C C C C C C C C C C C C	 light
Flaps $\geq 15^{\circ}$ C.A.I. offC.A.I. valve not closeT.L.A. < 9,5°		

Low idle light logic.